AUTHOR INDEX

PAGE

Aki, K., Husebye, E. S., Christoffersson, A. & Powell, C., Preliminary results on the 3-dimensional seismic structure of the lithosphere under the USGS Central California seismic array 319

Alexander, S. A. & Masse, R. P., The crustal velocity distribution of Norway; a reply to the comments of Sellevoll 501

Anderson, J. G., Motions near a shallow rupturing fault: evaluation of effects due to the free surface 575

Andrews, J. T. & Peltier, W. R., Glacial-Isostatic adjustment—I. The forward problem .. 605

Backus, G. & Mulcahy, M., Moment tensors and other phenomenological descriptions of seismic sources—I. Continuous displacements 341

Baum, P. J. & Bratenahl, A., Impulsive flux transfer events and solar flares 259

Beavan, J., Sacks, I. S., Snoke, J. A., Evans, R. & King, G., Single-site phase velocity measurement 253

Bessonova, E. N., Fishman, V. M., Shnirman, M. G., Sitnikova, G. A. & Johnson, L. R., The Tau method for inversion of travel times—II. Earthquake data.. 87

Blair, D., Topographic effects on the tidal strain tensor 127

Blair, D. & Sydenham, P., A tidal strain model for Hillgrove Gorge, Eastern Australia 141

Bocchio, F., Linear and angular deformations in three-dimensional, potential-invariant representations of the actual gravity field of the Earth and applications 155

Bratenahl, A. & Baum, P. J., Impulsive flux transfer events and solar flares 259

Calcagnile, G. & King, D. W., *P*-wave velocities in the upper mantle beneath Fennoscandia and Western Russia 407

Cazanave, A. & Lambeck, K., Long term variations in the length of day and climatic change .. 555

Chandra, U., Focal mechanism of the Koyna, India earthquake of 1967, December 10 247

Chapman, C. H., Exact and approximate generalized ray theory in vertically inhomogeneous media.. 201

Chiaruttini, C., Tidal loading on the Italian peninsula 773

Christoffersson, A., Husebye, E. S., Aki, K. & Powell, C., Preliminary results on the 3-dimensional seismic structure of the lithosphere under the USGS Central California seismic array 319

Clark, J. A. & Farrell, W. E., On postglacial sea level 647

Connelly, J. B., Tectonic development of the Bismarck Sea based on gravity and magnetic modelling 23

Crampin, S., A comment on 'The early structural evolution and anisotropy of the oceanic upper mantle' 193

Currie, R. G., The spectrum of sea level from 4 to 40 years 513

Currie, R. G. & Vicente, R. O., Maximum entropy spectrum of long-period polar motion .. 67

Dagley, P., Mussett, A. E. & Eckford, M., The British Tetriary Igneous province: palaeomagnetism and ages of dykes, Lundy Island, Bristol Channel 595

Dahlen, F. A., The passive influence of the oceans upon the rotation of the Earth 363

Dey-Sarkar, S. K. & McMechan, G. A., Quantized ray theory for non-zero focal depths .. 235

Eckford, M., Mussett, A. E. & Dagley, P., The British Tertiary Igneous Province: palaeomagnetism and ages of dykes, Lundy Island, Bristol Channel 595

Evans, R., Sacks, I. S., Snoke, J. A., King, G. & Beavan, J., Single-site phase velocity measurement 253

Farrell, W. E. & Clark, J. A., On postglacial sea level 647

Fishman, V. M., Bessonova, E. N., Shnirman, M. G., Sitnikova, G. A. & Johnson, L. R., The Tau method for inversion of travel times—II. Earthquake data.. 87

Forsyth, D., Reply to 'A comment on "The early structural evolution and anisotropy of the oceanic upper mantle"' 199

Gibson, I. L. & Wood, D. A., The relationship between depth of burial and mean intensity of magnetization for basalts from Eastern Iceland 497

Graber, M. A., Polar motion spectra based upon Doppler, IPMS and BIH data 75

Haubrich, R. A. & Wilson, C. R., Meteorological excitation of the Earth's wobble 707

Haubrich, R. A. & Wilson, C. R., Atmospheric contributions to the excitation of the Earth's wobble 1901–1970 745

Hibbs, R. D. & Jones, F. W., The calculation of the electromagnetic fields of a sheet current source with arbitrary spatial intensity distribution over a layered half space—I. The general method and results 433

Hibbs, R. D. & Jones, F. W., The calculation of the electromagnetic fields of a sheet current source with arbitrary spatial intensity distribution over a layered half space—II. The computer program and its application 453

PAGE

Husebye, E. S., Christoffersson, A., Aki, K. & Powell, C., Preliminary results on the 3-dimensional seismic structure of the lithosphere under the USGS Central California seismic array 319
Johnson, L. R., Bessonova, E. N., Fishman, V. M., Shnirman, M. G. & Sitnikova, G. A., The Tau method for inversion of travel times—II. Earthquake data.. 87
Jones, F. W. & Hibbs, R. D., The calculation of the electromagnetic fields of a sheet current source with arbitrary spatial intensity distribution over a layered half space—I. The general method and results 433
Jones, F. W. & Hibbs, R. D., The calculation of the electromagnetic fields of a sheet current source with arbitrary spatial intensity distribution over a layered half space—II. The computer program and its application 453
Kaila, K. L. & Krishna, V. G., Nature of the 400-Km discontinuity in the Earth's mantle .. 185
Khan, M. A., Comparative evaluation of recent global representations of Earth's gravity field .. 535
King, D. W. & Calcagnile, G., *P*-wave velocities in the upper mantle beneath Fennoscandia and Western Russia 407
King, G., Sacks, I. S., Snoke, J. A., Evans, R. & Beavan, J., Single-site phase velocity measurement 253
Krishna, V. G. & Kaila, K. L., Nature of the 400-km discontinuity in the Earth's mantle .. 185
Lambeck, K. & Cazenave, A., Long term variations in the length of day and climatic change .. 555
Lilley, F. E. M., A magnetometer array study across Southern Victoria and the Bass Strait area, Australia 165
Mansinha, L. & Shen, Po-Yu., Oscillation, nutation and wobble of an elliptical rotating earth with liquid outer core 467
Masse, R. P. & Alexander, S. S., The crustal velocity distribution of Norway; a reply to the comments of Sellevoll 501
McMechan, G. A. & Dey-Sarkar, S. K., Quantized ray theory for non-zero focal depths .. 235
Mitchell, B. J., Anelasticity of the crust and upper mantle beneath the Pacific ocean from the inversion of observed surface wave data 521
Mulcahy, M. & Backus, G., Moment tensors and other phenomenological descriptions of seismic sources—I. Continuous displacements 341
Mussett, A. E., Dagley, P. & Eckford, M., The British Tertiary Igneous Province: palaeomagnetism and ages of dykes, Lundy Island, Bristol Channel 595
Niedziolka, E., The palaeomagnetic studies of varved clays from Warsaw Basin.. 761
Oldenburg, D. W., Ionospheric current structure as determined from ground-based magnetometer data 41
Parasnis, D. S., Effect of a uniform overburden on the passage of a thermal wave and the temperatures in the underlying rock 189
Peltier, W. R., Glacial-Isostatic adjustment—II. The inverse problem 669
Peltier, W. R. & Andrews, J. T., Glacial-Isostatic adjustment—I. The forward problem .. 605
Powell, C., Husebye, E. S., Christoffersson, A. & Aki, K., Preliminary results on the 3-dimensional seismic structure of the lithosphere under the USGS Central California seismic array 319
Rochester, M. G., The secular decrease of obliquity due to dissipative core-mantle coupling .. 109
Sacks, I. S., Snoke, J. A., Evans, R., King, G. & Beavan, J., Single-site phase velocity measurement 253
Sellevoll, M. A., A comment on compressional velocity distribution beneath Scandinavia and Western Russia 499
Shen, Po-Yu, A theory of toroidal core oscillations of the Earth 307
Shen, Po-Yu & Mansinha, L.,, Oscillation, nutation and wobble of an elliptical rotating Earth with liquid outer core 467
Shnirman, M. G., Bessonova, E. N., Fishman, V. M., Sitnikova, G. A. & Johnson, L. R., The Tau method for inversion of travel times—II. Earthquake data.. 87
Sitnikova, G. A., Bessonova, E. N., Fishman, V. M., Shnirman, M. G. & Johnson, L. R., The Tau method for inversion of travel times—II. Earthquake data.. 87
Snoke, J. A., Sacks, S, I., Evans, R., King, G. & Beavan, J., Single-site phase velocity measurement 253
Stewart, I. C. F., Mantle plume separation and the expanding Earth 505
Sydenham, P. & Blair, D., A tidal strain model for Hillgrove Gorge, Eastern Australia 141
Vicente, R. O. & Currie, R. G., Maximum entropy spectrum of long-period polar motion .. 67
Vilas, J. F. A., Palaeomagnetism of the lower Cretaceous Sierra De Los Condores group Cordoba Province Argentina 295
Wiggins, R. A., Body wave amplitude calculations—II 1
Wilson, C. R. & Haubrich, R. A., Meteorological excitation of the Earth's wobble 707

PAGE

Wilson, C. R. & Haubrich, R. A., Atmospheric contributions to the excitation of the Earth's wobble 1901–1970 745
Wood, D. A. & Gibson, I. L., The relationship between depth of burial and mean intensity of magnetization for basalts from Eastern Iceland 497
Woodhouse, J. H., On Rayleigh's principle 11

SUBJECT INDEX

PAGE

Aeronomy

Impulsive flux transfer events and solar flares, *A. Bratenahl & P. J. Baum* 259

Book reviews 503

Dynamics of the Earth

Maximum entropy spectrum of long-period polar motion, *R. O. Vicente & R. G. Currie* .. 67
Polar motion spectra based upon Doppler, IPMS and BIH data, *Michael A. Graber* .. 75
The secular decrease of obliquity due to dissipative core–mantle coupling, *M. G. Rochester* .. 109
The passive influence of the oceans upon the rotation of the Earth, *F. A. Dahlen* 363
Oscillation, nutation and wobble of an elliptical rotating earth with liquid outer core, *Po-Yu Shen & L. Mansinha* 467
Long term variations in the length of day and climatic change, *Kurt Lambeck & Anny Cazenave* 555
Meteorological excitation of the Earth's wobble, *Clark R. Wilson & Richard A. Haubrich* .. 707
Atmospheric contributions to the excitation of the Earth's wobble 1901–1970, *Clark R. Wilson & Richard A. Haubrich* 745

Earth tides

Topographic effects on the tidal strain tensor, *Dane Blair* 127
A tidal strain model for Hillgrove Gorge, Eastern Australia, *Dane Blair & Peter Sydenham* .. 141
Tidal loading on the Italian peninsula, *Claudio Chiaruttini* 773

Earth's core

The secular decrease of obliquity due to dissipative core–mantle coupling, *M. G. Rochester* .. 109
A theory of toroidal core oscillations of the Earth, *Po-Yu Shen* 307

Earth's lithosphere

A tidal strain model for Hillgrove Gorge, Eastern Australia, *Dane Blair & Peter Sydenham* .. 141
A comment on ' The early structural evolution and anisotropy of the oceanic upper mantle ', *Stuart Crampin* 193
Reply to 'A comment on " The early structural evolution and anisotropy of the oceanic upper mantle" ', *Don Forsyth* 199
Preliminary results on the 3-dimensional seismic structure of the lithosphere under the USGS Central California seismic array, *Eystein S. Husebye, Anders Christoffersson, Keiti Aki & Christine Powell* 319
P-wave velocities in the upper mantle beneath Fennoscandia and Western Russia, *D. W. King & G. Calcagnile* 407
A comment on compressional velocity distribution beneath Scandinavia and Western Russia, *Markvard A. Sellevoll* 499
The crustal velocity distribution of Norway; a reply to the comments of Sellevoll, *S. A. Alexander & R. P. Masse* 501
Anelasticity of the crust and upper mantle beneath the Pacific ocean from the inversion of observed surface wave attenuation, *Brian J. Mitchell* 521

Earth's mantle

The secular decrease of obliquity due to dissipative core–mantle coupling, *M. G. Rochester* .. 109
Nature of the 400-km discontinuity in the Earth's mantle, *K. L. Kaila & V. G. Krishna* .. 185
Mantle plume separation and the expanding Earth, *Ian C. F. Stewart* 505

Earthquakes

Focal mechanism of the Koyna, India earthquake in 1967, December 10, *Umesh Chandra* .. 247

PAGE

Elastic wave theory

Body wave amplitude calculations—II, *Ralph A. Wiggins* 1
On Rayleigh's principle, *J. H. Woodhouse* 11
Exact and approximate generalized ray theory in vertically inhomogeneous media, *C. H. Chapman* 201
Quantized ray theory for non-zero focal depths, *George A. McMechan & Samir K. Dey-Sarkar* 235
A theory of toroidal core oscillations of the Earth, *Po-Yu Shen* 307
Moment tensors and other phenomenological descriptions of seismic sources—I. Continuous displacements, *George Backus & Marjorie Mulcahy* 341
Motions near a shallow rupturing fault: evaluation of effects due to the free surface, *J. G. Anderson* 575

Electromagnetic induction

The calculation of the electromagnetic fields of a sheet current source with arbitrary spatial intensity distribution over a layered half space—I. The general method and results, *R. D. Hibbs & F. W. Jones* 433
The calculation of the electromagnetic fields of a sheet current source with arbitrary spatial intensity distribution over a layered half space—II. The computer program and its application, *R. D. Hibbs & F. W. Jones* 453

Glaciology

Glacial–Isostatic adjustment—I. The forward problem, *W. R. Peltier & J. T. Andrews* .. 605
Glacial–Isostatic adjustment—II. The inverse problem, *W. R. Peltier* 669

Gravity field, Earth

Linear and angular deformations in three-dimensional, potential-invariant representations of the actual gravity field of the Earth and applications, *F. Bocchio* 155
Comparative evaluation of recent global representations of Earth's gravity field, *M. A. Khan* 535

Gravity methods and surveys

Tectonic development of the Bismarck Sea based on gravity and magnetic modelling, *J. B. Connelly* 23

Heat flow

Effect of a uniform overburden on the passage of a thermal wave and the temperatures in the underlying rock, *D. S. Parasnis* 189

Inverse problem

The tau method for inversion of travel times—II Earthquake data, *E. N. Bessonova, V. M. Fishman, M. G. Shnirman, G. A. Sitnikova & L. R. Johnson* 87

Ionosphere

Ionospheric current structure as determined from ground-based magnetometer data, *Douglas W. Oldenburg* 41

Magnetic methods and surveys

Tectonic development of the Bismarck Sea based on gravity and magnetic modelling, *J. B. Connelly* 23
A magnetometer array study across Southern Victoria and the Bass Strait area, Australia, *F. E. M. Lilley* 165

Meteorology

Long term variations in the length of day and climatic change, *Kurt Lambeck & Anny Cazenave* 555
Meteorological excitation of the Earth's wobble, *Clark R. Wilson & Richard A. Haubrich* .. 707
Atmospheric contributions to the excitation of the Earth's wobble 1901–1970, *Clark R. Wilson & Richard A. Haubrich* 745

Normal modes of the earth

Oscillation, nutation and wobble of an elliptical rotating earth with liquid outer core, *Po-Yu Shen & L. Mansinha* 467

PAGE

Oceanography

The passive influence of the oceans upon the rotation of the Earth, *F. A. Dahlen* 363
The spectrum of sea level from 4 to 40 years, *Robert G. Currie* 513
On postglacial sea level, *W. E. Farrell & J. A. Clark* 647

Palaeomagnetism

Palaeomagnetism of the Lower Cretaceous Sierra De Los Condores group Cordoba Province Argentina, *Juan F. A. Vilas* 295
The relationship between depth of burial and mean intensity of magnetization for basalts from Eastern Iceland, *D. A. Wood & I. L. Gibson* 497
The British Tertiary Igneous Province: palaeomagnetism and ages of dykes, Lundy Island, Bristol Channel, *A. E. Mussett, P. Dagley & M. Eckford* 595
The palaeomagnetic studies of varved clays from Warsaw Basin, *Elzbieta Niedzioka* .. 761

Seismology

Body wave amplitude calculations—II, *Ralph A. Wiggins* 1
The Tau method for inversion of travel times—II Earthquake data, *E. N. Bessonova, V. M. Fishman, M. G. Shnirman, G. A. Sitnikova & L. R. Johnson* 87
Exact and approximate generalized ray theory in vertically inhomogeneous media, *C. H. Chapman* 201
Quantized ray theory for non-zero focal depths, *George A. McMechan & Samir K. Dey-Sarkar* 235
Focal mechanism of the Koyna, India earthquake of 1967, December 10, *Umesh Chandra* .. 247
Single-site phase velocity measurement, *I. Selwyn Sacks, J. Arthur Snoke, Russ Evans, Geoffrey King & John Beavan* 253
Preliminary results on the 3-dimensional seismic structure of the lithosphere under the USGS Central California seismic array, *Eystein S. Husebye, Anders Christoffersson, Keiti Aki & Christine Powell* 319
Moment tensors and other phenomenological descriptions of seismic sources—I. Continuous displacements, *George Backus & Marjorie Mulcahy* 341
P-wave velocities in the upper mantle beneath Fennoscandia and Western Russia, *D. W. King & G. Calcagnile* 407
Anelasticity of the crust and upper mantle beneath the Pacific ocean from the inversion of observed surface wave attenuation, *Brian J. Mitchell* 521
Motions near a shallow rupturing fault: evaluation of effects due to the free surface, *J. G. Anderson* 575

Tectonics

Tectonic development of the Bismarck Sea based on gravity and magnetic modelling, *J. B. Connelly* 23
Mantle plume separation and the expanding Earth, *Ian C. F. Stewart* 505
Glacial–Isostatic adjustment—I. The forward problem, *W. R. Peltier & J. T. Andrews* .. 605
Glacial–Isostatic adjustment—II. The inverse problem, *W. R. Peltier* 669